The orbit and ocular adnexa are important sites for primary and secondary diseases. Various tissue types such as osseous, vascular, neural, muscular, and glandular may be involved with specific pathologies. Within this space is a juxtaposition of numerous structures that sub serve visual as well as extraorbital functions. Therefore, ophthalmic symptoms are common presenting findings with most orbital disease but some cases may be totally asymptomatic. Timely and appropriate intervention can preserve the visual functions as highlighted by this case report.

Case Report

A 32 year old patient presented to the out patient department with complaints of protrusion of left eye ball for three and half years and cosmetic disfigurement. The protrusion was painless and gradually progressive. The patient was minimally symptomatic.

On general physical examination vitals were within normal limit. No abnormality was detected on examination of CVS, GIT, RESP and CNS. Ocular examination revealed DVA 6/6 both eyes. Hertel exophthalmometry at 110 mm IPD revealed 19mm in RE and 24 mm in LE. Thus an axial proptosis of 5mm was present in LE. Ocular movements were full and free. Patient was orthophoric. Pupillary and lens examination was normal. No disc oedema or retinal striae was seen on fundus examination. Optic nerve functions were within normal limit (WNL). No scotoma was revealed in visual fields carried at Humphrey 30-2 perimeter. IOP RE was 15 mmHg and LE was 17 mmHg.

Haematological investigations like haemogram was WNL. Free T3, T4, TSH level were WNL. USG B SCAN revealed a space occupying lesion in the retro orbital space with acoustic hollowness. CECT HEAD revealed an intraconal mass which was well circumscribed and encapsulated. The mass had displaced the optic nerve medially (Figure 1). The optic nerve was distinct from the mass and of normal size. The extra ocular muscles were of normal size and neither bony nor muscle infiltration was seen. Thus with these investigation and history the following differential diagnosis were made.

- Cavernous Haemangioma
- Localized Neurofibroma
- Schwannoma
- Fibrous Histiocytoma
- Haemangiopericytoma
- Optic Nerve Sheath Meningioma

We decided to treat the patient by excision of the intraorbital mass. As the mass had displaced the optic nerve there was risk of irreversible damage to it with further growth of the tumour. It was also a cause of cosmetic disfigurement. Hence it was decided to excise the intraorbital mass.
As the mass was lateral to the optic nerve in the retro orbital space, it was decided to approach the tumour by lateral orbitotomy. It involved dissection of the skin and subcutaneous tissue to expose the lateral orbital rim. The attachment of temporalis muscle was disinserted and the periosteum incised and freed from the underlying the bone. It was then reflected to expose the bare orbital rim. Here the facilities of oncosurgeon were utilized. Then two osteotomies were made to excise the bone and the intra orbital space was exposed (Figure 2). The tumour was carefully looked for and location mapped. Then with the help of cryo application the mass was carefully excised taking care not injure the optic nerve. The excised specimen measuring 2.2x2.5x1.2 cm was sent for HPE (Figure 3). Then the maxillofacial team took over and fixed the excised bone with the parent structure with the help of 3 micro plates (Figure 4). The overlying skin and subcutaneous tissue were closed in layers.

**Histopathological Diagnosis:** Classical Schwannoma [S100 positive] (Figure 5)

**Post Op Follow Up**

As the tumour was in close approximation with the optic nerve there was optic nerve concussion and oedema while stripping off the tumour. So, the patient had VA of no perception of light (PL) with mid dilated pupil sluggishly reacting to light. He was started on Inj Methyl Prednisolone 1gm i.v for three days. His vision slowly improved and he was BCVA-6/6 (LE) by 12th post op day and his pupillary reactions returned to normal. He also had lateral rectus paresis which gradually improved.

Thus the multi speciality approach comprising a team of ophthalmologist, oncosurgeon, maxillofacial surgeon and pathologist led to complete excision of the mass, perfect fixation and alignment of the excised bone, complete visual rehabilitation and correct diagnosis.

**Discussion**

Schwannomas are slow-growing benign tumours arising from the Schwann cells of peripheral, cranial, sympathetic, and spinal nerves\(^5\). It accounts for 0.7 to 2.3% of all histopathologically proven orbital tumors\(^8\)\(^\text{-}^\text{12}\). They are localised and well encapsulated, usually unilateral and rarely malignant\(^13\)\(^\text{-}^\text{14}\). They are typically extraconal, but can be intraconal as present in our case\(^15\). They are asymptomatic when small\(^16\) and cause symptoms due to their size. They possess no single diagnostic clinical feature. Ultrasonically an encapsulated solid mass with a well demarcated anterior border is typically seen. However CT scan is the most useful preoperative investigative tool\(^17\).

Schwannoma of the orbit could occur at any age with no gender predilection\(^18\). The mean age of its occurrence is usually 40 years.

The most common presenting features of Schwannoma of the orbit are exophthalmos, restriction of ocular motility and diplopia. Besides these, pressure effects such as papilloedema and optic atrophy may also be found.

The diagnosis of Schwannoma is confirmed by histopathology by the presence of Antoni A and Antoni B patterns.

**References**


